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EXAMINER

CHRISTENSEN, A

ART UNIT

PAPER NUMBER

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Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

| | | |
|------------------------------|--------------------------------------|--------------------------------|
| Office Action Summary | Application No. 08/877,728 | Applicant(s) Okawara |
| | Examiner Andy Christensen | Group Art Unit 2712 |



Responsive to communication(s) filed on Feb 2, 2000

This action is **FINAL**.

Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle* 35 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claim

Claim(s) 1-7, 9-38, 40-45, and 47-50 is/are pending in the application.

Of the above, claim(s) _____ is/are withdrawn from consideration.

Claim(s) _____ is/are allowed.

Claim(s) 1-7, 9-38, 40-45, and 47-50 is/are rejected.

Claim(s) _____ is/are objected to.

Claims _____ are subject to restriction or election requirement.

Application Papers

See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

The drawing(s) filed on _____ is/are objected to by the Examiner.

The proposed drawing correction, filed on _____ is approved disapproved.

The specification is objected to by the Examiner.

The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

All Some* None of the CERTIFIED copies of the priority documents have been

received.

received in Application No. (Series Code/Serial Number) _____.

received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

Notice of References Cited, PTO-892

Information Disclosure Statement(s), PTO-1449, Paper No(s). _____

Interview Summary, PTO-413

Notice of Draftsperson's Patent Drawing Review, PTO-948

Notice of Informal Patent Application, PTO-152

-- SEE OFFICE ACTION ON THE FOLLOWING PAGES --

1. The Applicant's amendment filed February 2, 2000 has overcome the 35 USC 112 rejection of Claim 48 and the rejection is withdrawn.
2. The Applicant's traversal of the objection to the drawings is not deemed to be persuasive. The specification clearly identifies the material shown therein to be "conventional" (See Page 1, Lines 9-12, Page 3, Lines 21-22, Page 6, Lines 23-24.

The drawings are objected to. Figures 1-5, 12-13, 14A and 14B should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g).

3. The Applicant's arguments filed February 2, 2000 have been fully considered by the Examiner but they are not deemed to be persuasive.

The Applicant argues that Kawanami does not disclose or suggest to set a speed characteristic of a lens with a displayed menu. However this feature is not recited in the claims.

The Applicant argues that Shimizu fails to disclose or suggest a camera apparatus which includes a means for setting a motion characteristic of the lens with a display menu including a plurality of items. However the Examiner has relied upon the combination of Kawanami (which is a camera having a display that allows the operator to visually know the state of each of various control actions of the camera) and Shimizu (which teaches setting the zoom speed of a camera lens using a menu displayed on a display).

The Applicant has amended Claims 14, 17, 26 and 29 to recite a camera part and a lens part and argues that Sato fails to disclose or suggest that the camera part includes a storing means for storing the operational condition set in the lens. In response, the claim does not recite an "operational condition set in the lens". Furthermore, it is inherent that a camera part is present in Sato since a picture can be taken by the device, and there is a CPU (5), a multipurpose operation part (21) and a selecting means (22) that enables the user to make selections of a driving mode as desired (Column 5, Lines 16-19), these items inherently residing within a camera part of some kind. Furthermore these items are distinct from the lens part as seen in Figure 1. In addition it is clear that the CPU stores the operational condition set in the lens because it generates control signals to drive the lenses in response to the operation of the zoom ring (Column 4, Lines 26-41).

The Applicant argues that Haraguchi does not disclose that when the rotation of the zoom ring member is stopped the zoom lens is kept moving during a predetermined period. However Haraguchi specifically teaches this feature as seen in Column 23, Line 65, which states that the zoom motor continues to rotate for t msec.

The Applicant argues that Takahashi does not disclose structure and/or steps for changing a reference value of a change amount of rotation of the ring member for permitting/inhibiting motion of the magnification lens group in order to control a start timing of motion of the magnification lens group when the ring member is rotated.

In response, Claim 44 does not recite "in order to control a start timing of motion of the magnification lens group when the ring member is rotated". The Examiner maintains the position that Takahashi discloses the limitations of the claim as recited.

The Applicant argues that Sato does not teach to control the driving characteristic of the zoom lens according to the rotation amount of the zoom ring member, and according to a photographing program.

However the claim does not recite a photographing program but rather a photographing state. Such is clearly disclosed in Sato since a response characteristic of the motion of the magnification lens group is changed in accordance with a user selected driving mode (Column 5, Lines 10-19; Column 7, Lines 19-26). A change in driving mode is clearly a change in photographing state. Furthermore, Column 8, Lines 31-60 of Sato disclose that such a change is made in accordance with a selected photographing "program".

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 9-10, 14-25, 40 and 41 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 9 and 10 are recited as being dependent upon Claim 8 which has been cancelled.

Therefore the dependence of these claims is incorrect. It is assumed that they depend from Claim 1 since the limitations of Claim 8 have been placed in Claim 1 by amendment.

Claims 14 and 17 recite the limitation "the correlation transmitted from the lens part" in lines 16-17. There is insufficient antecedent basis for this limitation in the claim in that there is no prior reference to a transmission of a correlation.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

5. Claims 14-37, 40-41, 48 and 50 are rejected under 35 USC 102(e) as being anticipated by Sato et al. (U.S. Patent No. 5,648,836).

Regarding Claim 14, Sato et al. disclose an image pickup apparatus having a camera part (See Figure 1 and note that it is inherent that a camera part is present in Sato since a picture can be taken by the device, and there is a CPU (5), a multipurpose operation part (21) and a selecting means (22) that enables the user to make selections of a driving mode as desired, Column 5, Lines 16-19, these items inherently residing within a camera part of some kind), and a lens part with a

magnification lens and a ring member that drives the lens part (See Figure 1), comprising a detection means (2) which detects a change amount of rotation of the ring member (1) for driving the lens part, and a control means (5) provided with a plurality of characteristics (Column 5, Lines 10-19) for determining a correlation between an output of the detection means and a motion of the magnification lens, and for controlling motion/stop of at least the magnification lens along an optical axis in accordance with an output of the detection means, and a storing means (CPU, 5), provided in the camera part, for storing information of the correlation transmitted from the lens part (the CPU stores information of a correlation transmitted from the lens part because it generates a control signal to drive the lenses in response to the operation of the zoom ring, Column 4, Lines 26-41).

Regarding Claim 15, Sato et al. disclose that the plurality of characteristics of the control means include a first characteristic for controlling a motion amount of the magnification lens per unit rotation of the ring member to be constant (Column 5, Lines 37-43) and a second characteristic for controlling a motion speed of the magnification lens to be variable in accordance with a rotation speed of the ring member (Column 5, Line 62 - Column 6, Line 10).

Regarding Claim 16, Sato et al. disclose that the plurality of characteristics of the control means include a first characteristic for controlling a motion amount of the magnification lens per unit rotation of the ring member to become a first predetermined amount and a second

characteristic for controlling a motion amount of the magnification lens per unit rotation of the ring member to become a second predetermined amount different from the first predetermined amount (Column 6, Lines 49-63).

As to Claim 17, see Examiner's comments regarding Claim 14 and note that Sato et al. disclose that the plurality of characteristics are settable by a user (Column 5, Lines 10-19; Column 7, Lines 19-26; Column 8, Lines 31-46).

As to Claim 18, see Examiner's comments regarding Claim 15.

As to Claim 19, Sato et al. disclose that the characteristic of the control means is changed in accordance with the state of an operation switch capable of being operated upon by a user (Column 5, Lines 10-19; Column 7, Lines 19-26; Column 8, Lines 31-46).

Regarding Claim 20, Sato et al. disclose that the characteristic of the control means is changed in accordance with information of the characteristic of the control means set by a user (Column 5, Lines 10-19; Column 7, Lines 19-26; Column 8, Lines 31-46).

Regarding Claim 21, Sato et al. disclose that the characteristic of the control means is changed in accordance with a photographing state (Column 8, Lines 31-46).

As to Claims 22 and 24, see Examiner's comments regarding Claim 16.

As to Claims 23 and 25, see Examiner's comments regarding Claim 19.

As to Claim 26, see Examiner's comments regarding Claim 14 and note that Sato et al. disclose the ring member as disposed concentrically about a lens optical axis (Figure 1), and also discloses an outputting means for outputting information of the correlation from the lens unit to the storing means in the main body (inherent in the operation within CPU 5 since once the correlation has been determined it must be stored in order to provide the drive signal for the lens).

As to Claim 27, see Examiner's comments regarding Claim 15.

As to Claim 28, see Examiner's comments regarding Claim 16.

As to Claim 29, see Examiner's comments regarding Claim 26 and note that Sato et al. disclose a setting means for a user to set the characteristics of the control means (Column 5, Lines 10-19; Column 7, Lines 19-26; Column 8, Lines 31-46).

As to Claim 30, see Examiner's comments regarding Claim 15.

Regarding Claim 31, Sato et al. disclose an operation switch capable of being operated upon by a user and a change means for changing the characteristic of the control means in accordance with a state of the operation switch (Column 5, Lines 10-19; Column 7, Lines 19-26; Column 8, Lines 31-46).

Regarding Claim 32, Sato et al. disclose that the change means changes the characteristic of the control means in accordance with information of the characteristic of the control means set by a user (Column 5, Lines 10-19; Column 7, Lines 19-26; Column 8, Lines 31-46).

Regarding Claim 33, Sato et al. disclose that the change means changes the characteristic of the control means in accordance with a photographing state (Column 8, Lines 31-46).

As to Claim 34, see Examiner's comments regarding Claim 16.

As to Claim 35, see Examiner's comments regarding Claim 31.

As to Claim 36, see Examiner's comments regarding Claim 32.

As to Claim 37, see Examiner's comments regarding Claim 33.

Regarding Claims 40 and 41, Sato et al. disclose that the ring member is disposed concentrically about the lens group (Figure 1).

Regarding Claim 48, Sato et al. disclose an image pickup apparatus comprising a ring member (1) disposed concentrically about a lens optical axis (Figure 1), a detection means (2) for detecting a change amount of rotation of the ring member, a control means for determining motion direction and speed of a magnification lens group in accordance with an output from the detection means and performing motion/stop control of the magnification lens group along the

optical axis (Column 4, Lines 25-41), and a change means for changing a response characteristic of the motion of the magnification lens group relative to a detection result of the detection means in accordance with a photographing state (Column 5, Lines 10-19; Column 7, Lines 19-26; Column 8, Lines 31-46).

Regarding Claim 50, Sato et al. disclose that the change means changes the motion speed of the magnification lens group relative to an output of the detection means (Column 7, Lines 19-26).

6. Claims 44-45 and 47 are rejected under 35 USC 102(b) as being anticipated by Takahashi (U.S. Patent No. 5,159,370).

Regarding Claim 44, Takahashi discloses an image pickup apparatus comprising a ring member (51) disposed concentrically about a lens optical axis of a lens unit, a detection means for detecting a change amount of rotation of the ring member (Column 9, Lines 1-14), a control means for determining motion direction and speed of a magnification lens group in accordance with an output of the detection means and performing motion/stop control of the magnification lens group along the optical axis (Column 9, Lines 15-49), and a change means for changing a response characteristic of the motion of the magnification lens group relative to a detection result of the detection means between a motion start time state and a motion state of the magnification lens group (Column 9, Lines 21-29), wherein the change means changes a reference value of a

change amount of rotation of the ring member for permitting/inhibiting the motion of the magnification lens group (Column 10, Lines 1-11)..

Regarding Claim 45, Takahashi discloses that the lens group is removably and exchangeably mounted on a main body of the image pickup apparatus (Column 2, Line 46).

Regarding Claim 47, Takahashi discloses that the change means changes the motion speed of the magnification lens group relative to an output of the detection means (Column 9, Lines 21-29).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-7 and 9-13 are rejected under 35 USC 103(a) as being unpatentable over Kawanami (U.S. Patent No. 5,278,601) in view of Shimizu (U.S. Patent No. 5,485,200).

Regarding Claim 1, Kawanami discloses an image pickup apparatus having a lens group, comprising a ring member (51) for driving a lens (52), a detection means (55,56) for detecting a change amount of rotation of the ring member, a control means (59) for performing motion/stop

control of the lens group along an optical axis in accordance with a detection result by the detection means, and motion direction setting means (63) for a user to set a desired motion direction of the lens group relative to the rotation direction of ring member, wherein the motion direction setting means comprises a character generator, menu setting means, display means, a menu function control unit for controlling the character generator in accordance with the operation state of the menu setting means, and for displaying a predetermined menu on a display screen of the display means (Column 3, Lines 15-17).

Kawanami does not disclose that the menu setting means is operated on by the user and does not disclose a setting means for selecting a desired setting item among a plurality of items displayed on the predetermined menu and setting a condition regarding the motion direction of the lens group. However Shimizu discloses using a menu displayed on a display screen as a setting means to permit a user of a camera to operate thereupon to select various camera operating conditions from among a plurality of items displayed on a predetermined menu, such as the speed at which the focal length of the camera lens is moved when a zooming operation is performed (Column 5, Lines 36-46). Using a displayed menu for selecting a camera's operating settings makes the camera easier to operate by reducing the number of operation switches (Column 1, Lines 18-28; Column 1, Line 65 - Column 2, Line 3). In view of the teaching in Shimizu it would have been obvious to one of ordinary skill in the art at the time of the invention to configure the menu of Kawanami so as to serve as a setting means operated upon by a user for selecting a desired setting time among a plurality of items displayed on the predetermined menu and setting a

condition regarding the motion direction of the lens group in order to reduce the number of operating switches and make the camera easier to use.

Regarding Claim 2, Kawanami and Shimizu disclose that the lens group includes a magnification lens (Kawanami; 52) and the motion direction setting means comprises an operation switch (Kawanami; 63) capable of being operated by an user, and a change means (Kawanami; 64, 59) for changing the motion direction of the lens group relative to the rotation direction of the ring member in accordance with the operation of the operation switch (Kawanami; Column 5, Lines 20-65).

Regarding Claim 3, Kawanami and Shimizu disclose that a lens unit is made removable relative to the main body of the image pickup apparatus (Kawanami; Column 5, Lines 25).

Regarding Claim 4, Kawanami and Shimizu disclose that ring member is disposed concentrically about a optical axis of the lens group (Kawanami; Figure 5).

Regarding Claim 5, Kawanami and Shimizu disclose that the lens group includes a magnification lens (Kawanami; 52) and the motion direction setting means comprises a memory means (Kawanami; 64) for storing motion direction information of the lens group relative to the rotation of the ring member, the motion direction being given by a user (Kawanami; switch 63),

and a change means (Kawanami; 64, 59) for changing the motion direction of lens group in accordance with the motion direction information stored in the memory means.

Regarding Claims 6 and 11, Kawanami and Shimizu disclose that a lens unit is made removable relative to the main body of the image pickup apparatus (Kawanami; Column 5, Line 25).

Regarding Claims 7, 12 and 13, Kawanami and Shimizu disclose that ring member is disposed concentrically about a optical axis of the lens group (Kawanami; Figure 5).

Regarding Claim 9, Kawanami and Shimizu disclose that the lens unit is made removable relative to the main body of the image pickup apparatus (Kawanami; Column 5, Line 25).

Regarding Claim 10, Kawanami and Shimizu disclose that the ring member is disposed concentrically about an optical axis of the lens group (Kawanami; Figure 5).

8. Claims 38 and 49 are rejected under 35 USC 103(a) as being unpatentable over Sato et al. in view of Kawanami.

Regarding Claim 38, Sato et al. disclose all of the limitations except that of the lens unit being removably mounted. However Kawanami teaches that such a design is well known in the art

(Column 1, Lines 19-22). Enabling the lens unit of Sato et al. to be removably mounted would clearly increase the utility of the device by permitting the use of other zoom lens units thereby providing a greater variety of zooming options. Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to make the lens unit in Sato et al. removably mounted in order to increase the utility of the device by providing a greater variety of zooming options.

Regarding Claim 49, Sato et al. disclose all of the limitations except that of the lens unit being removably and exchangeably mounted. However Kawanami teaches that such a design is well known in the art (Column 1, Lines 19-22). Enabling the lens unit of Sato et al. to be removably and exchangeably mounted would clearly increase the utility of the device by permitting the use of other zoom lens units thereby providing a greater variety of zooming options. Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to make the lens unit in Sato et al. removably and exchangeably mounted in order to increase the utility of the device by providing a greater variety of zooming options.

9. Claims 42-43 are rejected under 35 USC 103(a) as being unpatentable over Takahashi in view of Haraguchi et al.

Regarding Claim 42, Takahashi discloses an image pick-up apparatus comprising a ring member (51) disposed concentrically about a lens optical axis of a lens unit, a detecting means for

detecting a change amount of rotation of the ring member (Column 9, Lines 1-14), and a control means for performing motion/stop control of the magnification lens group along the optical axis in accordance with a detection result by the detection means (Column 9, Lines 15-49).

Takahashi does not disclose an inhibition means for inhibiting the magnification lens to stop during a predetermined period after the ring member stops rotating. However Haraguchi et al. et al. disclose inhibiting a magnification lens from stopping during a predetermined period after a stop command has been issued so that the lens can be stopped more precisely at a desired termination position (Column 23, Line 63 - Column 24, Line 2). In view of the teaching in Haraguchi et al. et al. it would have been obvious to one of ordinary skill in the art at the time of the invention to provide in Takahashi an inhibition means for inhibiting the magnification lens to stop during a predetermined period after the ring member stops rotating in order to more precisely perform the stopping operation.

Regarding Claim 43, Takahashi discloses that the lens unit is removably and exchangeably mounted on a main body of the image pickup apparatus (Column 2, Line 46).

10. Applicants' amendment necessitated the new ground of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

11. Any response to this final action should be mailed to:

Box AF
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or faxed to:

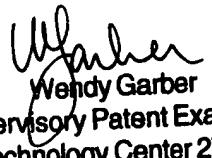
(703) 308-6306 (for informal or draft communications, please label "PROPOSED" or "DRAFT").

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA., Sixth Floor (Receptionist).

12. Any inquiry regarding this communication or earlier communications from the examiner should be directed to Andy Christensen whose telephone number is (703) 308-9644.

If attempts to reach the examiner by telephone are unsuccessful the examiner's supervisor, Wendy Garber, can be reached on (703) 305-4929.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-3900.


Wendy Garber
Supervisory Patent Examiner
Technology Center 2700

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March 29, 2000